PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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Applicant:	Lawrence R. MILLS
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Examiner:	Christopher G. FINDLEY
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APPEAL BRIEF

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed July 15, 2008, and in response to the Final Office Action dated May 15, 2008, wherein Appellant (Applicant) appeals from the Examiner's rejection of Claims 1-5, 8-9, 11-21 and 23-26.

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I. Real Party In Interest

The real party in interest is Sensormatic Electronics Corporation, which is the assignee of the subject application by virtue of assignment recorded on Reel/Frame 015118/0911 on March 17, 2004.

II. Related Appeals and Interferences

None.

III. Status of Claims

Claims 1-5, 8-9, 11-21 and 23-26 are pending in this Application. Claims 6, 7, 10 and 22 have been cancelled without prejudice and without disclaimer of subject matter. Claims 1-5, 8-9, 11-21 and 23-26 have been finally rejected, and it is from the final rejection of Claims 1-5, 8-9, 11-21 and 23-26 that this Appeal is taken.

IV. Status of Amendments

The claims have not been amended subsequent to the imposition of the Final Office Action dated May 15, 2008.

V. Summary of Claimed Subject Matter

The present invention, as recited in independent Claims 1, 16 and 21, is directed toward a system and method for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area, by transforming wide angle image data into panoramic view data and virtual view data, as described throughout the Specification including

at least in the Summary of the Invention, paragraphs [0007 through 0012]. With respect to independent Claim 1, a system for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area is claimed. Referring to FIG. 2 and as described at least in Paragraphs [0030] through [0045], a buffer is configured to receive wide-angle image data corresponding to a monitored area (See FIG. 2; ¶ [0034]). A processor is operably coupled to the buffer (See FIG. 2; ¶ [0034]), and is configured to transform wide angle image data received by the buffer into panoramic view data corresponding to at least one panoramic view of the monitored area and virtual view data corresponding to at least one virtual view of a portion of the at least one panoramic view (See FIG. 2; ¶ [0036]). The buffer is further configured to encode at least one panoramic image and at least one virtual view from the wide angle image data for display (See FIG. 2; ¶ [0039], [0041]).

With respect to independent Claim 16, a method of generating a graphical user interface is claimed. Referring to FIG. 2 and as described at least in Paragraphs [0030] and [0045], the method performs the steps of buffering wide-angle data corresponding to a wide-angle image of a monitored area (See FIG. 2; ¶ [0034]), transforming the buffered data into panoramic data for at least one panoramic view using a panoramic transformation (See FIG. 2; ¶ [0036]) and transforming portions of the buffered data into virtual view data for at least one virtual view using a virtual view transformation (See FIG. 2; ¶ [0036]).

With respect to independent Claim 21, a system for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area is claimed. Regarding the means-plus-function clauses of Claim 21, exemplary structure in the specification for performing the claimed functions is indicated {in brackets}. Referring to FIG. 2 and as described at least in Paragraphs [0030] and [0045], the claim recites means {input buffer

220} for storing wide-angle image data (See FIG. 2; ¶ [0034]). The claim also recites means {data processor 225} for processing and transforming wide-angle image data received from the storing means {input buffer 220} into panoramic view data corresponding to at least one panoramic view of the monitored area and into virtual view data corresponding to at least one virtual view of a portion of the at least one panoramic view (See FIG. 2; ¶ [0036]).

VI. Grounds of Rejection to be Reviewed on Appeal

1. Claims 1-4, 8, 11-14, 16-18, 20-21, 23 and 26 were rejected under 35 U.S.C. §102(e) as being anticipated by U. S. Publication No. 2004/0257436 A1 to Koyanagi *et al.* ("Koyanagi").
2. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyanagi in view of U.S. Publication No. 2007/0182819 A1 to Monroe.
3. Claims 5, 15, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyanagi in view of U.S. Patent No. 5,563,650 A to Poelstra.

VII. Argument

The Rejection of Claims 1-4, 8, 11-14, 16-18, 20, 21, 23 and 26 under 35 U.S.C. §102(e)

Claims 1-4, 8, 11-14, 16-18, 20-21, 23 and 26 were rejected under 35 U.S.C. § 102(e) as being anticipated by Koyanagi.

The Examiner fails to cite a reference disclosing each and every element of Applicant's Claimed Invention

Independent Claims 1, 16 and 21

Independent Claim 1 recites a system for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area. The system requires, among other things, a processor that transforms wide angle image data into "panoramic view data corresponding to at least one panoramic view of the monitored area, and virtual view data corresponding to at least one virtual view of a portion of the at least one panoramic view" and that encodes "at least one panoramic image and at least one virtual image from the wide angle image data for display." In other words, the present invention as recited in Claim 1, transforms a single captured image into both a panoramic view and a virtual view without having to recapture additional image data.

A rejection under 35 U.S.C. § 102 requires that each and every claimed element be disclosed in a single prior art reference. Koyanagi fails to disclose each of the claimed elements enumerated above. Specifically, Koyanagi fails to disclose or suggest a system that transforms wide angle data into both a panoramic view and a virtual view. In contrast, Koyanagi discloses the use of a pan tilter camera having a zoom lens with a telephotograph side and a wide-angle side. *See* Koyanagi ¶ [0042]. The wide-angle lens in Koyanagi is used to generate a panoramic view only upon demand when a user presses a panorama generation button. *See* Koyanagi ¶ [0052]. Data captured from the wide-angle lens is transformed into a stationary panoramic view which is then displayed on a screen. *See* Koyanagi ¶ [0042]-[0043] and [0052]. However, the image displayed in the operation area 6A, i.e. the area that the Examiner mistakenly equates to the virtual view of the present invention, is *not* generated from wide-angle data. Instead, the

image is captured ***directly from the pan tilter camera*** by mechanically controlling the pan tilter camera. *See* Koyanagi ¶ [0042]-[0043], and Figure 1. The user operates the pan tilter camera by moving a cursor over the panoramic or operation area, causing the pan tilter to center the camera on the selected point. *See* Koyanagi ¶ [0044]. Thus, the image displayed in the operation area is not a "virtual view" transformed from wide angle data, ***but an actual view*** captured from the pan tilter camera. As Koyanagi does not disclose each and every element of amended Claim 1, Applicant earnestly solicits reconsideration and withdrawal of this rejection.

Independent Claims 16 and 21 provide similar features to those recited in Claim 1. For example, Claim 16 recites a method of generating a graphical user interface by "transforming the buffered (wide-angle) data into panoramic data for at least one panoramic view using a panoramic transformation", and "transforming portions of the buffered (wide angle) data into virtual view data for at least one virtual view using a virtual view transformation." As discussed above with respect to independent Claim 1, Koyanagi fails to disclose a method whereby wide-angle data is transformed into panoramic data and into virtual view data. The image displayed in the operation area of FIG. 2 is an actual view, and not a virtual view. In Koyanagi, "[t]he monitor 2 displays the photographed screen 5 in an operation area 6A on the monitor 2". *See* Koyanagi ¶ [0043]. Because Koyanagi does not disclose each and every element of independent Claim 16, it cannot support a rejection of the appealed claims under 35 U.S.C. § 102.

Independent Claim 21 recites similar features to that of independent Claim 1, namely means for processing and transforming wide-angle image data into panoramic view data corresponding to at least one panoramic vie of the monitored area and into virtual view data corresponding to at least one virtual view of a portion of the at least one panoramic view.

Because Koyanagi does not disclose each and every element of independent Claim 21, it cannot support a rejection of the appealed claims under 35 U.S.C. § 102.

Thus, the Examiner has failed to cite a reference that discloses each and every element of Applicant's claims as required for a *prima facie* case of anticipation. Accordingly, the Examiner's rejection with respect to independent Claims 1, 16, and 21 should be reversed.

Further, Applicant notes that Koyanagi does not even suggest a processor that transforms wide angle image data into "panoramic view data corresponding to at least one panoramic view of the monitored area, and virtual view data corresponding to at least one virtual view of a portion of the at least one panoramic view" and that encodes "at least one panoramic image and at least one virtual image from the wide angle image data for display", since the system in Koyanagi captures an image directly from a pan tilter camera by mechanically controlling the pan tilter camera and thus the image displayed is not a "virtual view" but an actual view. Thus, because Koyanagi offers no suggestion of the features and/or steps recited in Claims 1, 16 and 21, there also can be no rejection under 35 U.S.C. § 103 involving the cited reference.

Regarding dependent Claims 2-4, 8, 11-14, 17-18, 20, 23 and 26, reference is made to the arguments in favor of the patentability of base independent Claims 1, 16, and 21 provided above. Claims 2-4, 8, 11-14, 17-18, 20, 23 and 26 are believed patentable at least by virtue of their dependency on one or the other of independent Claims 1, 16 and 21. Accordingly, the Examiner's rejection with respect to Claims 1-4, 8, 11-14, 16-18, 20, 21, 23 and 26 should likewise be reversed.

The Rejection of Claims 9 and 19 under 35 U.S.C. §103(a)

Claims 9 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Koyanagi in view of Monroe.

As discussed above, Koyanagi fails to disclose each of the features recited in independent Claims 1, 16 and 21. A system that combines the features of Koyanagi and Monroe, assuming such a system could be created, still does not disclose all of the elements recited in Claims 9 and 19, since each of these claims depends from one of independent Claims 1 or 16. Particularly, a system combining the features of Koyanagi and Monroe does not produce a processor that transforms wide angle image data into panoramic view data corresponding to at least one panoramic view of the monitored area, and virtual view data corresponding to at least one virtual view of a portion of the at least one panoramic view and that encodes at least one panoramic image and at least one virtual image from the wide angle image data for display.

Thus, the Examiner has failed cite a combination of references disclosing each and every element of Applicant's claims as required for a *prima facie* case of obviousness. Accordingly, the Examiner's rejection with respect to Claims 9 and 19 should be reversed.

The Rejection of Claims 5, 15, 24 and 25 under 35 U.S.C. §103(a)

Claims 5, 15, 24 and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Koyanagi in view of Poelstra.

As discussed above, Koyanagi fails to disclose each of the features recited in independent Claims 1, 16 and 21. A system that somehow combines the features of Koyanagi and Poelstra still does not disclose all of the elements recited in Claims 5, 15, 24 and 25, since each of these claims depends from one of independent Claims 1 or 16, as discussed above.

Thus, the Examiner has failed cite a combination of references disclosing each and every element of Applicant's claims as required for a *prima facie* case of obviousness. Accordingly, the Examiner's rejection with respect to Claims 5, 15, 24 and 25 should be reversed.

VIII. Conclusion

For at least the reasons provided above as well as provided in the record, the claim rejections are believed to be improper and a result of clear error by the Examiner. Accordingly, pending Claims 1-5, 8-9, 11-21 and 23-26 are believed to be in condition for allowance, and a reversal of the Examiner's rejections is respectfully requested.

The Commissioner is hereby authorized to credit overpayments or charge payment of any additional fees associated with this communication to Deposit Account No. 502104.

Respectfully submitted,

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APPENDIX A: CLAIMS ON APPEAL

1. A system for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area, said system comprising:

a buffer configured to receive wide-angle image data corresponding to the monitored area; and

a processor operably coupled to said buffer and configured to:

transform wide angle image data received by the buffer into:

panoramic view data corresponding to at least one panoramic view of the monitored area; and

virtual view data corresponding to at least one virtual view of a portion of the at least one panoramic view; and

encode at least one panoramic image and at least one virtual view from the wide angle image data for display.

2. A system according to claim 1, further comprising:

a user input module configured to provide user command data to said processor; and

said processor being further configured to determine the virtual view data based on the user command data.

3. A system according to claim 2, wherein the processor is further configured to determine reference data corresponding to an area in the panoramic view represented by the virtual view.

4. A system according to claim 2, further comprising a first video camera system operably coupled to said buffer and said processor, said first video camera system operable to generate wide-angle image data.

5. A system according to claim 4, wherein said video camera system includes a fisheye lens.

8. A system according to claim 1, wherein said processor performs operations on the wide-angle image data to correct distortion in the wide-angle image data, such that said panoramic view and said virtual view are corrected images.

9. A system according to claim 4, further comprising:

a second video camera system operably coupled to said buffer and said processor, said second video camera system having a second video camera and being configured to aim the second video camera at a portion of the monitored area according to pan, tilt and zoom command data, and configured to capture video image data; and

wherein the processor is further configured to communicate pan, tilt and zoom command data to cause the first video camera system to aim the first video camera at the monitored area; and

wherein captured video image data from the second video camera is included in the at least one virtual view.

11. A system according to claim 4, wherein the system transforms wide-angle image data received by the buffer into virtual view data corresponding to at least one virtual view and into panoramic view data corresponding to at least one panoramic view in real time.

12. A system according to claim 2, further comprising a display device operably coupled to said processor to display the at least one panoramic view and the at least one virtual view.

13. A system according to claim 12, where the at least one panoramic view corresponds to a substantially undistorted view of the monitored area, and the at least one virtual view corresponds to a portion of the at least one panoramic view.

14. A system according to claim 12, further comprising at least one reference window overlaid on at least one portion of the at least one panoramic view, each overlaid portion defining the portion of the at least one panoramic view to which the at least one virtual view corresponds,

and the at least one reference window having a size and a position determined according to the user command data.

15. A system according to claim 14, wherein:

the at least one panoramic view includes a first panoramic view and a second panoramic view, the first panoramic view corresponding to a first portion of the monitored area, and the second panoramic view corresponding to the remaining portion of the monitored area;

the at least one virtual view includes a first virtual view and a second virtual view, the first virtual view corresponding to a first portion of the first panoramic view, and the second virtual view corresponding to a second portion of the second panoramic view; and

a combination of the first panoramic view and the second panoramic view provide a 360° view of the monitored area relative to a vertical axis.

16. A method of generating a graphical user interface, said method comprising:

buffering wide-angle data corresponding to a wide-angle image of a monitored area;

transforming the buffered data into panoramic data for at least one panoramic view using a panoramic transformation;

transforming portions of the buffered data into virtual view data for at least one virtual view using a virtual view transformation.

17. A method according to claim 16, further comprising:

determining pan, tilt and zoom values;

determining the portions of the buffered data to transform into virtual view data for at least one virtual view based on the pan, tilt and zoom values.

18. A method according to claim 17, further comprising determining reference data based on the pan, tilt and zoom values.

19. A method according to claim 18, wherein the buffered wide-angle data is received from a first video camera system, said methodology further comprising:

communicating pan, tilt and zoom commands to a second camera system; and

receiving virtual view data for the at least one virtual view from the second camera system.

20. A method according to claim 16 further comprising encoding reference data, virtual view data and panoramic view data for output.

21. A system for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area, said system comprising:

means for storing wide-angle image data corresponding to a monitored area; and

means for processing and transforming said wide-angle image data received from said storing means into panoramic view data corresponding to at least one panoramic view of the monitored area and into virtual view data corresponding to at least one virtual view of a portion of the at least one panoramic view.

23. A system according to claim 14, wherein the size and the position of each reference window determines pan, tilt and zoom values for the corresponding virtual view.

24. A system according to claim 15, wherein the at least one reference window is user-selectable for controlling the size and the position of the reference window to determine pan, tilt and zoom values for the corresponding virtual view.

25. A method according to claim 16, wherein the at least one panoramic view includes:

a first panoramic view corresponding to a first portion of the monitored area;

a second panoramic view corresponding to a remaining portion of the monitored area; and

the at least two panoramic views combine to provide a 360° view of the monitored area relative to a vertical axis; and

wherein said method further comprises encoding the at least two panoramic views and at least one virtual view of a portion of at least one of the at least two panoramic views for simultaneous display.

26. A method according to claim 17, further comprising:

determining a position and a size of at least one reference window positioned over the portion of at least one of the at least one panoramic view corresponding to the virtual view, the position and size defined according to user command data; and

wherein the pan, tilt and zoom values are based upon the position and the size of the at least one reference window.

APPENDIX B: EVIDENCE APPENDIX

No evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 of this title or of any other evidence entered by the Examiner has been relied upon by Appellant in this Appeal, and thus no evidence is attached hereto.

APPENDIX C: RELATED PROCEEDINGS APPENDIX

Since Appellant is unaware of any related appeals and interferences, no decision rendered by a court or the Board is attached hereto.